Habitat Mosaics of Corte Madera Creek Watershed

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The topography of the Corte Madera Creek watershed generates a mosaic of differing habitats that support a wide variety of native plants and animals, including several rare or endangered species.

The watershed is defined by the ridgelines that enclose the Fairfax, Cascade, San Anselmo, Sleepy Hollow, Tamalpais, Ross, Larkspur and Corte Madera creeks catchment areas and many smaller tributaries on their downhill courses from the headwaters into San Francisco Bay.

The headwaters, the valley floor, and the tidally-influenced marshes comprise the different sections of the watershed. The upper watershed is characterized by steep slopes and generally undeveloped lands. The valley floors have much gentler slopes and support much of the human habitat. And the marshes at the bay edge create a water-world that filters water, provides protection from floods and sea level rise, and provides habitat to some of our most endangered wildlife.

Headwaters

The steep upper slopes support mixed evergreen forests, riparian scrub/forest, chaparral, and grasslands. Due to topography, the creeks here generally carry flow only during and shortly after rainfall, although deep pools may persist all summer.

The cool, shaded north-facing slopes support conifers such as Douglas-fir and redwood. The large trees and dense canopies in these forests are the home of rare northern spotted owls, a federally threatened species, which is known to nest near Larkspur and Ross creeks. Other species include the more common Cooper's hawk, chestnut-backed chickadee, and the Steller's jay.

The south-facing slopes tend to be drier. Live oaks and bays are the predominant trees, with chaparral and grasslands interspersed. Native shrubs include toyon, ceanothus, and coyote brush. Oak titmice, California towhees, acorn woodpeckers, and scrub jays can be found here.

Much of the native grasslands of perennial bunchgrasses and annual wildflowers has been overwhelmed by Mediterranean annual grass species, but native wildflowers such as wild hyacinth, clovers, iris, owl's clover, and goldfields can be found in spring. Purple needlegrass is a native perennial bunchgrass that is California's state grass. Its extensive root system can grow 20 feet deep, helping to prevent soil erosion. It produces a lot of seed, important food for animals.

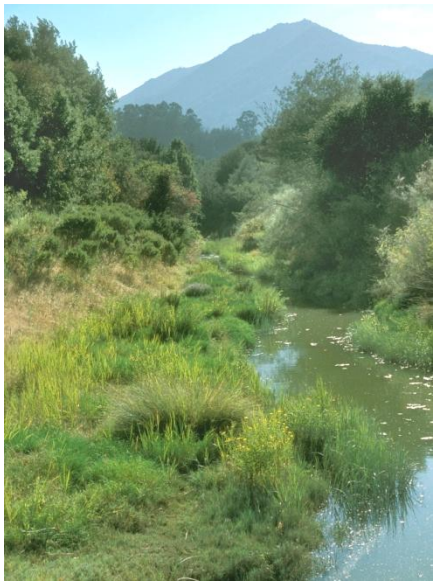
On the sunnier and dryer slopes of the uplands, live-oaks and bay trees trace the courses of ephemeral creeks, as is seen here on the south-facing flank of Loma Alta. Photo by Charles Kennard

Valley Floor

The valley floor is characterized by gentler slopes and richer soils. Native oak savannah and grasslands have largely been displaced by residential and commercial land uses, and a mile of Corte Madera

Creek has been encased in a concrete flood control channel to protect against floods. Even so, valley riparian habitats with willow, alder, big-leaf maple, Oregon ash, box-elder, and California pipevine are found on gravelly stream banks. These constrained habitats support black phoebes, warblers, goldfinches, flycatchers, and green herons.

Several creeks in the Corte Madera Creek watershed have been designated by the U.S. Fish and Wildlife Service as critical habitat for steelhead trout, including Corte Madera Creek, Larkspur Creek, Cascade Creek, Ross Creek, San Anselmo Creek, and Sleepy Hollow Creek. These trout need cool, shaded streams in which to feed and grow before heading to the bay and ocean.



On the valley floor, creeks are the last refuge of native habitat, and also present opportunities for revegetation with native plants, as here on Larkspur Creek, where Friends began work in 1996. Photo by Charles Kennard

Tidal Marsh

Tidal marshes at the edge of San Francisco Bay, though diminished in size, represent a fascinating habitat that supports a rich plant and animal life. Plants in the salt marsh have adapted to the fluctuating water and salinity levels that the tides bring. Topography is especially important here, as inches can mean the difference between high, middle, and low marsh habitats.

Characteristic native plants in high marsh include gumplant, saltgrass, alkali-heath, and saltbush. Middle marsh zones are dominated by saltgrass and pickleweed. Few plants can tolerate the salinities and tidal action present in the low marsh areas. Pickleweed and both native (*Spartina foliosa*) and nonnative (*Spartina densiflora*) cordgrass are found in low marsh zone where salinities are highest.

The tiny salt marsh harvest mouse is an endangered species that depends on dense pickleweed for its primary food source and shelter. Ridgway's rail (formerly called the California clapper rail) is an endangered bird which nests and forages in low and middle marsh zones with dense stands of cordgrass and pickleweed and in well-developed tidal channel networks. The shy and elusive California black rail is a federal species of concern, listed by the state as threatened; it nests and forages in pickleweed and cordgrass. Other salt marsh birds include the San Pablo song sparrow, saltmarsh common yellowthroat, red-winged blackbird, egret, and great blue heron.

The remaining marshland of the Corte Madera Creek estuary consists of Hal Brown Park in Kentfield, and east of Highway 101. The majority of the latter area was diked off for hayfields early in the 20th century, but in the past few decades much of it has been returned to marshland. Photo by Charles Kennard